

## **Remarks**

Reconsideration and reexamination of the above-identified patent application, as amended, are respectfully requested. Claims 1-13 and 15-42 are pending in this application upon entry of this Amendment. In this Amendment, the Applicant has amended claims 1 and 32-33. No claims have been cancelled or added in this Amendment. Of the pending claims, claims 1 and 32-33 are independent claims.

### **Claim Rejections - 35 U.S.C. § 102**

In the Office Action mailed April 12, 2006, the Examiner rejected claims 1-13 and 15-42 under 35 U.S.C. § 102(a or e) as being anticipated by U.S. Patent No. 6,094,605 issued to Blendermann et al. ("Blendermann"). The Applicant respectfully traverses this rejection and has amended independent claims 1 and 32-33 to more clearly define the claimed invention.

#### **1. The Claimed Invention**

The claimed invention is generally directed to a data storage system (as set forth in amended independent claims 1 and 32) and a data storage method (as set forth in amended independent claim 33) for storing and retrieving data for a host processor.

As set forth in representative amended independent claim 1, the data storage system includes a plurality of different types of physical data storage devices (PDSDs). Each PDSD has data storage attributes. The data storage attributes of the PDSDs differ from one another based on the types of the PDSDs. An outboard storage manager is operable with the PDSDs for presenting to a host processor a virtual data storage image (VDSI) having a desired data storage attribute for a particular data storage application by combining different types of at least some of the PDSDs, based on the data storage attributes of the PDSDs, in an arrangement suitable for providing the desired data storage attribute such that the combined

PDSD arrangement emulates the virtual data storage image. Each PDSD individually lacks the desired data storage attribute.

The storage manager includes interim storage. The storage manager stores in the interim storage data received from the host processor via the VDSI and then transfers the data from the interim storage to the PDSDs of the combined PDSD arrangement. The storage manager stores in the interim storage data received from the PDSDs of the combined PDSD arrangement and then transfers the data from the interim storage to the host processor via the VDSI.

## **2. Blendermann**

The Examiner posited that Blendermann discloses a data storage system for storing data for a host processor comprising PDSDs (24, 26, 28, 30) having different data storage attributes, an outboard storage manager presenting a VDSI of a desired attribute (noting col. 3, lines 6-24) by organizing the PDSDs in an arrangement suitable for providing it based on their data storage attributes (noting that since in the hierarchical system described, a higher level may include some, but not all data included in a lower level) such that the PDSD arrangement emulates the VDSI (noting col. 3, lines 25-35).

## **3. The Claimed Invention Compared to Blendermann**

The claimed invention as set forth in the amended independent claims is generally different than Blendermann as the claimed invention includes combining different types of PDSDs which have differing data storage attributes into a PDSD arrangement suitable for emulating a VDSI having a desired data storage attribute. That is, the claimed invention virtually presents a data storage image (i.e., data storage device) having a desired data storage attribute (which each PDSD individually lacks) by combining different types of PDSDs having the data storage attributes which together provide the desired data storage attribute.

Blendermann discloses a storage system having an interim data storage buffer which emulates PDSDs present in the system. The PDSDs are different types and have

differing data storage attributes. For example, the PDSDs include disk storage and tape storage which have differing data storage attributes. Blendermann is directed to solving the problem which occurs when a given host is allocated one of the PDSDs and thereby prevents other hosts from being allocated the PDSD (col. 1, lines 19-31). Blendermann solves this problem by having the interim data storage buffer emulate the PDSD such that one or more hosts will have the impression that they have been allocated with the PDSD at a given time (col. 3, lines 6-35). As such, Blendermann does not teach or suggest the interim data storage buffer emulating a data storage image having a desired data storage attribute (which each PDSD individually lacks) by combining different types of PDSDs having the data storage attributes which together provide the desired data storage attribute as claimed.

In view of the foregoing amendments and remarks, the Applicant respectfully submits that independent claims 1 and 32-33, as amended, are patentable over Blendermann. Claims 2-13 and 15-31 depend from amended independent claim 1 and include the limitations therein. Claims 34-42 depend from amended independent claim 33 and include the limitations therein. Therefore, the Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-13 and 15-42 under 35 U.S.C. § 102(a or e) as being anticipated by Blendermann.

**Claim Rejections - 35 U.S.C. § 103**

The Examiner rejected claims 1-13 and 15-42 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,330,621 issued to Bakke et al. ("Bakke") in view of U.S. Patent No. 5,394,532 issued to Belsan ("Belsan"). Alternatively, the Examiner rejected claims 1-13 and 15-42 under 35 U.S.C. § 103(a) as being unpatentable over Bakke in view of Blendermann.

The Examiner noted that Bakke has a common assignee (Storage Technology Corporation) and at least one common inventor (Stephen H. Blendermann) with the above-identified patent application. The Examiner further noted that Bakke (filed January 15, 1999;

issued December 11, 2001) only qualifies as prior art under 35 U.S.C. § 102(e) as the above-identified patent application has an effective filing date of June 11, 2001. As such, the Examiner indicated that the 35 U.S.C. § 103(a) rejections may be overcome by a showing that Bakke is disqualified under 35 U.S.C. § 103(c) as prior art in a rejection under 35 U.S.C. § 103(a). 35 U.S.C. § 103(c) generally disqualifies subject matter, which only qualifies as prior art under 35 U.S.C. § 102(e), from being prior art under 35 U.S.C. § 103(a) against the claimed invention of the above-identified patent application if that subject matter and the claimed invention “were, at the time the invention was made, owned by the same person.”

Statement Concerning Common Ownership

The above-identified patent application and U.S. Patent No. 6,330,621 (Bakke) were, at the time the invention of the above-identified patent application was made, owned by Storage Technology Corporation (“the Assignee”).

The Assignee is the owner of the above-identified patent application by virtue of an Assignment recorded on June 11, 2001 at Reel 011902, Frame 0695. The Assignee is the owner of U.S. Patent No. 6,330,621 (Bakke) by virtue of an Assignment recorded on January 15, 1999 at Reel 009721, Frame 0407.

Accordingly, Bakke is disqualified from being used in a rejection under 35 U.S.C. § 103(a) against the claims of the above-identified patent application. Thus, the Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-13 and 15-42 under 35 U.S.C. § 103(a) as being unpatentable over Bakke in view of Belsan; and the Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-13 and 15-42 under 35 U.S.C. § 103(a) as being unpatentable over Bakke in view of Blendermann.

**Double Patenting**

The Examiner rejected claims 1-13 and 15-42 on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6,094,605 (Blendermann) in view of U.S. Patent No. 6,330,621 (Bakke). In response, the Applicant has filed herewith a Terminal Disclaimer with respect to U.S. Patent No. 6,094,605 (Blendermann) in order to overcome this double patenting rejection.

The Examiner rejected claims 1-13 and 15-42 on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,330,621 (Bakke) in view of U.S. Patent No. 5,394,532 (Belsan). In response, the Applicant has filed herewith a Terminal Disclaimer with respect to U.S. Patent No. 6,330,621 (Bakke) in order to overcome this double patenting rejection.

The Examiner indicated that claims 1-13 and 15-42 are directed to an invention not patentably distinct from claims 1-9 of commonly assigned U.S. Patent No. 6,094,605 (Blendermann) and from claims 1-10 of commonly assigned U.S. Patent No. 6,330,621 (Bakke). The Examiner further indicated that either Blendermann or Bakke would form the basis for a rejection of claims 1-13 and 15-42 under 35 U.S.C. § 103(a). The Examiner noted that in order to resolve these issues, the Assignee can under 35 U.S.C. § 103(c) either show that the conflicting inventions were commonly owned at the time the invention of the above-identified patent application was made, or name the prior inventor of the conflicting subject matter.

With respect to U.S. Patent No. 6,330,621 (Bakke), the Applicant has previously made herein the proper showing required under 35 U.S.C. § 103(c) to disqualify Bakke from forming the basis for a rejection of any claims of the above-identified patent application under 35 U.S.C. § 103(a).

With respect to U.S. Patent No. 6,094,605 (Blendermann), the Applicant respectfully submits that claims 1-13 and 15-42 of the above-identified patent application are patentable under 35 U.S.C. § 103(a) over Blendermann for the reasons discussed above with respect to the patentability of the claims under 35 U.S.C. § 102 (a or e) over Blendermann.

**CONCLUSION**

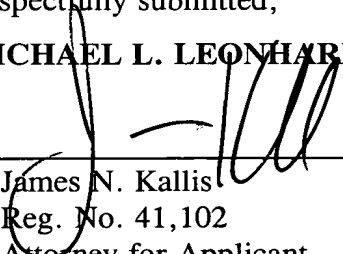
In summary, claims 1-13 and 15-42, as amended, meet the substantive requirements for patentability. The case is in appropriate condition for allowance. Accordingly, such action is respectfully requested.

If a telephone or video conference would expedite allowance or resolve any further questions, such a conference is invited at the convenience of the Examiner.

Respectfully submitted,

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